Sigmoidopexy and Tube Sigmoidostomy in Sigmoid Volvulus: A Case Report

Type of Article: Case Report

Amabra Dodiyi-Manuel, John Fiberesima
Department Of Surgery, Braithwaite Memorial Specialist Hospital, Port Harcourt, Nigeria

ABSTRACT

Background: Sigmoid volvulus is a surgical condition with high recurrence and mortality rates following non operative decompression of the colon. It is for this reason that definitive surgery is required for effective treatment. The aim of this report is to present the outcome following sigmoidopexy and tube sigmoidostomy in a patient with sigmoid volvulus.

Method: The case records of a 46 year old man who presented with abdominal pain, absolute constipation, abdominal distension and bilous vomiting as well as literature of the subject using available journals and books in addition to online search through goggle and Medline were utilized.

Results: Examination showed abdominal distension with generalized and absent bowel sounds. Plain abdominal x-ray (erect and supine), showed evidence of sigmoid volvulus. Sigmoidopexy and tube sigmoidostomy (using foley catheter) were subsequently done. Surgery and post operative recovery were uneventful. Sigmoidostomy became functional on the first post operative day with a reduction in the volume of the discharge by the 4th post operative day. Catheter was removed by the 10th day and the patient discharged on the 11th day after surgery. He has been followed up for 6 months now on outpatient basis and remains in a good state of health without any symptoms.

Conclusion: Sigmoidopexy and tube sigmoidostomy should be considered as an effective option for the surgical treatment of patients who present with sigmoid volvulus without gangrene.

Key words: Sigmoid volvulus; sigmoidopexy; tube sigmoidostomy; Nigeria

Correspondence: Dr A. Dodiyi-Manuel

E-mail : dodman_05@yahoo.com

INTRODUCTION

The clinical pattern and epidemiology of sigmoid volvulus are well defined. While gangrenous bowel requires resectional surgery, the management of viable colon following volvulus has a variety of options which include resectional and non resectional surgeries[1]. The performance of Non- resectional procedures is increasing being practiced because of the avoidance of bowel preparation and resection[1]. This is a report involving sigmoidopexy and tube sigmoidostomy in a patient with viable colon following sigmoid volvulus.

A 48 year old man presented to the Braithwaite Memorial Specialist Hospital in Port Harcourt through the accident and emergency department with a history of colicky abdominal pain and absolute constipation of 4 days' duration, abdominal distension and projectile bilous vomiting of 2 days' duration without any history of weight loss. On examination, he was conscious, oriented in time, person and place and haemodynamically stable with no pallor, dehydration, jaundice, cyanosis nor lymphadenopathy. The abdomen was distended with generalized tenderness and the bowel sounds were absent. Rectal examination was negative for stool , blood or palpable mass. On laboratory evaluation, he had a packed cell volume of 40% and white blood cell count of 11,000 per cubic ml with normal kidney function test (electrolyte, urea and creatinine). Plain erect abdominal x-ray showed multiple air-fluid levels and the supine film showed dilated loops of large bowel (maximum diameter of 14cm) with the bent inner tube appearance apex of which is directed towards the patient's right shoulder. Laparotomy revealed sigmoid volvulus with viable bowel. The sigmoid colon was untwisted and sigmoidopexy was done at 2 points using silk sutures and intubated with a foley catheter passed through the anterior abdominal wall i.e left iliac fossa for decompression of the dilated sigmoid colon (sigmoidostomy). He had an uneventful post operative stay. Sigmoidostomy became functional on the 1st post operative day with a reduction of the discharge by the 4th post operative day. The catheter was removed and the patient discharged home on the 10th and 11th days respectively. He has been followed up for 6

months now on outpatient basis and remained in a good state of health without any symptom.

DISCUSSION

The sigmoid colon is the commonest site of volvulus affecting the colon[1-2]. Its geographical and racial distributions are variable. It is common in developing countries like Africa where it affects young, male patients but has a much lower incidence in the west where it affects the old and frail patients[3-4].

While chronic constipation is blamed for the western type of sigmoid volvulus,[5] a high fibre diet has been deemed a major factor in the development of sigmoid volvulus in the African population[6]. The diagnosis of sigmoid volvulus can be made with abdominal radiographs alone in 85% of cases[7]. Sigmoid volvulus classically appears as a markedly distended haustral sigmoid loop (bent inner tube appearance), the apex of which is directed towards the right shoulder. The management of viable sigmoid volvulus involves relief of obstruction and the prevention of recurrent attacks[8]. Non operative decompression of the bowel with sigmoidostomy has been described as the initial procedure of choice in patients with viable bowel following correction of fluid and electrolyte imbalance, nasogastric suctioning and analgesics[8-9]. This procedure was not carried out in the index patient because of the absence of a flexible Sigmoidoscope in our hospital. This non operative decompression is only a temporary measure that allows further medical assessment, bowel preparation and definitive surgery under improved circumstances which may be a resectional or non resectional procedure.

It has been documented that resection of the sigmoid colon with either primary anastomosis or colostomy is mandatory as lesser procedures have a higher incidence of recurrence[10]. However, a number of non-resectional procedures have been described for the management of a viable sigmoid colon. Sigmoidopexy[11-12] has the advantage of not requiring resection of the sigmoid colon and therefore, no bowel preparation. Welch and Anderson in 1987 reported a mortality rate of 52% and recurrence rate of 9% for sigmoidectomy while sigmoidopexy resulted in a mortality of 17% and recurrence of 36%[11]. A similar study carried out by Bagarani et al and reported in 1993 revealed mortality rates of 16% and 5% and recurrence rates of 16% and 28.5% for sigmoidectomy and sigmoidopexy respectively[13]. These studies did not stratify their patients into those with viable or gangrenous colon and the high mortality rate following resection may be related to resection for gangrene. Conversely, no case of recurrence was reported in a study by Jagetia et al involving 17 patients with sigmoid volvolus who had tube sigmoidostomy as a definitive procedure[14]. In their study, the malecot catheter was removed after 12 days and the patients were followed up for about 18 months (range 13-23 months)[14].

In spite of the varied outcomes, the report from the above studies does suggest that sigmoidopexy and tube sigmoidostomy can be done as a procedure in patients with sigmoid volvulus to reduce the mortality associated with resectional procedures in addition to reducing the recurrence rate.

CONCLUSION

Sigmoidopexy and tube sigmoidostomy should be considered as an effective option for the surgical treatment of patients who present with sigmoid volvulus without gangrene. Large case series and comparative studied in our setting is recommended to generate the needed evidence of the most suitable choice of treatment.

REFERENCES

1. Oncu M, Piskin B, Calik A. Volvolus of the sigmoid volvolus. S Afr J Surg 1991;29:48-49
2. Sackier JM. Gastrointestinal volvolus. Surgery(South African edition) 1989;66:1578-1583
3. Madiba TE, Thomson SR. Volvolus of the sigmoid colon.Gastroenterology forum 1997;8:28-33
4. Makoena TR, Madeba TE. Sigmoid volvolus among Africans in Durban. Trop Geograph Medicine 1995;47:216-217
5. Friedman JD, Odland MD, Bubrick MP. Experience with colonic volvolus. Dis Colon Rectum 1989;32:409-416
6. Meller SG, Phillie RKS. The aetiology and management of sigmoid volvolus in the united kingdom:How much colon need be excised? Ann Roy Coll Surg EMGL 1990;72:193-195
7. Agrez M, Cmeron D. Radiology of sigmoid volvolus. Dis Colon Rectum 1981;24:510
8. Madiba TE, Thomson SR. The management of sigmoid volvolus. J R Coll Surg Edinb 2000;45:74-80
9. Peoples JB, Mc Cafferty JC, Scher KS. Operative therapy for sigmoid volvolus. Identification of risk factors affecting outcome. Dis Colon Rectum 1990;33:643-646
10. HiltumenK, Syrj per thousand H,Matikainen M. Colonic volvolus. Diagnosis and results of treatment in 82 patients. Eur J Surg 1992;158:607-611
11. Welsch GH, Anderson JR. Acute volvolus of the sigmoid colon. World J Surg 1987;11:258-262
12. SalimAS. Managrment of acute volvolus of the sigmoid colon. World J Surg 1991;15:68-73
13. BagaraniM, Conde AS, Longo R. Sigmoid volvolus in West Africa. A prospective study in surgical treatments. Dis Colon Rectum 1993;36:186-190
14. Jagetia A, Verma S, Mittal D, Das Agarwal P, Jain S, Prasad P. Sigmoidopexy(tube sigmoidostomy) as a definitive surgical procedure for sigmoid volvolus. Indian J Gastroenterol 1998;17(4):129-130